



# FIBOS

Advanced Optical Measurements

## Single Channel Optical Gauge Amplifier OGA-01



The **OGA-01** is the first single-channel industrial optical gauge amplifier intended to replace strain gauge amplifiers. Featuring both static and dynamic measurement capabilities, the **OGA-01** provides high accuracy measurements from a single fiber optical gauge sensor that exceeds the performance of competing strain gauge technologies. The system is packaged in a 1U 19" rack mountable case that is ideal for industrial applications.

The **OGA-01** is designed to be paired with a FIBOS optical gauge sensor (OGS), which is manufactured in proven telecommunications fiber optic cable and is designed for harsh environments. Both intrinsically safe and immune to electromagnetic interference (EMI), the OGS can replace and outperform many traditional strain gauge solutions currently available.

### Key Features

**Measurement Accuracy:** +/-0.01 $\mu$ strain  
**Measurement Bandwidth:** DC – 1kHz (50kHz capable)  
**Output Signal:** Analog Output (0-5V); USB capable  
**Trigger:** Digital Trigger (In/Out) for synchronization

### Industries

**Oil & Gas** Intrinsically safe measurements (pressure, load and temperature)  
**Energy** EMI immune (wind turbines, generators, nuclear reactors)  
**Transportation** Vibration analysis



# FIBOS

Advanced Optical Measurements

## Optical Gauge Amplifier – OGA-01

Parameter	Units	Value	Notes
Number of Channels		1	
Measurement Accuracy	$\mu\epsilon$	+/- 0.01	Accuracy dependent on range
Measurement Range	$\mu\epsilon$	+/-1100	Software adjustable
Measurement Bandwidth	kHz	DC – 50	Typical is DC - 1kHz
Analog Output Range	V	0 – 5	Software adjustable
Output Voltage Noise	mV	5	
Operating Temperature	$^{\circ}\text{C}$	+10 ~ +60	

## Optical Gauge Sensor – OGS-XX

Maximum Elongation	%	2.8	Dependent on coating material
Operating Temperature	$^{\circ}\text{C}$	-40 ~ +200	
Distance from OGA-01	km	25	Distance can be extended